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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/540,395	06/23/2005	Hiroshi Sasaki	124460	9715
25944	7590	11/21/2006	EXAMINER GROUP, KARL E	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			ART UNIT	PAPER NUMBER

1755

DATE MAILED: 11/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/540,395

Applicant(s)

SASAKI ET AL.

Examiner

Karl E. Group

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 6-30-06, 6-23-05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 3,6,9,14 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3, the claims set forth "including 0" and "note that 0 is excluded" allowing for two different ranges in one claim. It cannot be determined if 0 is excluded or not.

Claim 6, it is not clear if the claims are limited to Sc and Y or all rare earths.

Claim 9 it is not clear what is intended by dry synthesis method.

Claim 14 fails to set forth an active process step which clearly defines the claimed invention. Also it is not clear what is intended by "at a time".

Claim Rejections - 35 USC § 102 and 103

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1,3-5,9-14 are rejected under 35 U.S.C. 102(a or e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Motoki et al (6,617,273).

Motoki et al teach a dielectric composition including a main component

$(Ca_{1-v-w}Sr_vBa_w)_k(Zr_{1-x-y}Ti_xHf_y)O_3$ where v ranges from 0-.15, w from 0-.33, k .975-1.01 (column 10, lines 13-26), x .01-.4 and y from .01-.02. The dielectric composition further includes a sintering auxiliary BaO, CaO and SiO₂ (column 4, lines 58-64). The sintering auxiliary would be glassy or at least form a glassy phase upon firing to aid in the sintering. The composition are mixed, dried and calcined at 1000-1200°C (column 4, lines 29-36). Capacitors are formed with Ni and fired at 600-800°C (column 7, lines 32-50). Although V₂O₅ is not taught, the claim was included in the rejection because it is not clear if 0% is excluded in view of the parenthesis.

The claims are considered anticipated or in the alternative the subject matter as a whole would have been obvious to one having ordinary skill in the art at the time of the invention to have selected the overlapping portion of the range disclosed by the prior art because overlapping ranges have been held to be a prima facie case of obvious, see In re Malagari, 182 U.S.P.Q 549.

6. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kojima et al (6,118,648) further in view of Motoki et al (6,617,273).

Kojima et al teach a dielectric composition including as a main component,

$(Ca_xSr_{1-x})O_m(Zr_{1-y}Ti_y)O_2$ where x is 0-1, y is 0-.1 and m is .75-1.04 (column 3, lines 35-60) and includes .2-5 mole % MnO and .1-10 mole% Al₂O₃. A glass component comprising BaCaSiO₂ is also added. Rare earth oxides and oxides of Nb,

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Mo, Ta and W may further be added, column 4, lines 51-67. The powders are mixed, dried, heated and fired at 1200-1300°C, see column 8, lines 10-17. Nickel alloys are used as the electrode, column 5, lines 6-7. Kojima et al fails to teach Hf in the main component.

Motoki et al teach a dielectric composition where $(Ca_{1-v-w}Sr_vBa_w)_k(Zr_{1-x-y}Ti_xHf_y)O_3$ is taught as a convention main component, note all the examples include the Hf. Motoki et al note the $(Ca_xSr_{1-x})O_m(Zr_{1-y}Ti_y)O_2$ phase is well known and further add Hf.


It would have been obvious to one of ordinary skill in the art at the time of the invention to further include Hf in the main component of Kojima et al et al because Motoki et al teach such an addition is known in the manufacture of capacitors and according to the examples is preferred over main components not containing Hf and exemplified by Kojima et al.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl E. Group whose telephone number is 571-272-1368. The examiner can normally be reached on M-F (6:30-4:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Karl E Group
Primary Examiner
Art Unit 1755

Keg
11-15-06